WHAT IS CLAIMED IS:

1. An energy absorbing steering column assembly comprising:

first and second members one of which is an immovable member to be supported on a vehicle body, and the other of which is a movable member to move in a first direction relative to the immovable member when impact load is applied;

a holding member mounted on the first member and formed with an elongate hole;

a sliding shaft mounted on the second member and arranged to slide forcibly in the elongate hole to absorb impact energy when the movable member moves in the first direction relative to the immovable member, the sliding shaft including a portion having cross sections of different sizes; and

an actuating mechanism to shift the position of the sliding shaft inserted in the elongate hole.

2. The steering column assembly as claimed in Claim 1, wherein the holding member and the sliding shaft form an energy absorbing mechanism which absorbs impact energy by frictional resistance and plastic deformation between the sliding shaft and the elongate hole caused by forcible sliding movement of the sliding shaft in an elongate direction in which the elongate hole is elongated; the sliding shaft includes a smaller portion having a smaller sectional size and a larger portion having a larger sectional size larger than the smaller sectional size; and the actuating mechanism is arranged to shift the position of the

sliding shaft in an axial direction of the sliding shaft passing through the elongate hole, from a first position at which the smaller portion of the sliding shaft is positioned within the elongate hole, to a second position at which the larger portion of the sliding shaft is positioned within the elongate hole.

3. The energy absorbing steering column assembly as claimed in Claim 1, wherein one of the cross sections of the sliding shaft contacts opposite edges of the elongate hole elongated in an elongate direction when the sliding shaft slides forcibly in the elongate hole in the elongate direction, and thereby subjects the opposite edges to frictional resistance so that the opposite edges undergo plastic deformation in accordance with the size of the one of the cross sections.

4. The energy absorbing steering column assembly as claimed in Claim 1, wherein the movable member and the immovable member form a steering column to be supported on the vehicle body so as to be collapsible by the the impact load.

5. The energy absorbing steering column assembly as claimed in Claim 1, wherein the holding member is provided on the immovable member, and the sliding shaft is connected with the movable member.

6. The energy absorbing steering column assembly as claimed in Claim 1, wherein the sliding shaft is formed with a tapered outer surface.

7. The energy absorbing steering column assembly as claimed in Claim 1, wherein the sliding shaft is formed with a stepped outer surface.

8. The energy absorbing steering column assembly as claimed in Claim 1, wherein the actuating mechanism includes:

a shaft shifting member actuator provided on the movable member; and

a shaft shifting member actuated by the shaft shifting member actuator so as to shift the position of the sliding shaft in an axial direction of the sliding shaft passing through the elongate hole.

9. The energy absorbing steering column assembly as claimed in Claim 8, wherein the shaft shifting member actuator is an electric motor controlled in accordance with an information signal representing the position of the sliding shaft in the elongate hole, and the shaft shifting member is a gear mechanism to shift the position of the sliding shaft in the axial direction with a torque generated by the electric motor.

10. The energy absorbing steering column assembly as claimed in Claim 8, wherein the shaft shifting member actuator is an electromagnetic actuator, and the shaft

shifting member is an actuation rod actuated by the electromagnetic actuator so as to shift the position of the sliding shaft in the axial direction.

11. The energy absorbing steering column assembly as claimed in Claim 8 further comprising a controlling section including a sensor section to sense an operating condition and a controller to control an amount of insertion of the sliding shaft in the elongate hole by controlling the actuator in accordance with the operating condition.

12. The energy absorbing steering column assembly as claimed in Claim 11, further comprising a position sensor sensing the position of the sliding shaft in the elongate hole, and the controller controls the shaft shifting member actuator in accordance with the position of the sliding shaft in the elongate hole.

13. The energy absorbing steering column assembly as claimed in Claim 1, wherein the holding member is provided on the movable member, and the sliding shaft is connected with the immovable member.

14. The energy absorbing steering column assembly as claimed in Claim 13, wherein the immovable member includes a holding part slidably guiding and holding the holding member.

15. The energy absorbing steering column assembly as claimed in Claim 14, wherein the sliding shaft is passed

through the holding part so that the sliding shaft is inserted in the elongate hole at a position within the holding part.

16. The energy absorbing steering column assembly as claimed in Claim 14, further includes a second holding part slidably guiding and holding the holding member at a position spatially separated from the holding part.

17. The energy absorbing steering column assembly as claimed in Claim 1, further comprising a portion mounted on the movable member and defining a support hole to support the sliding shaft movably in the axial direction, and to provide the sliding shaft with a force to move in the elongate hole in the elongate direction when the impact load is applied to the movable member.

18. The energy absorbing steering column assembly as claimed in Claim 1, wherein the elongate hole includes a narrow hole portion elongated in an elongate direction, and an enlarged hole portion to normally receive the sliding shaft inserted in the elongate hole and to allow the sliding shaft to slide in the elongate direction from the enlarged hole portion forcibly into the narrow hole portion when the impact load is applied to the movable member.

19. The energy absorbing steering column assembly as claimed in Claim 18, wherein the sizes of the cross sections of the sliding shaft are larger than a width between opposite edges of the narrow hole portion elongated in the

elongate direction and smaller than a sectional size of the second hole portion, the sectional size being larger than the width between the opposite edges.

20. An energy absorbing steering column assembly comprising:

first and second members one of which is an immovable member to be supported on a vehicle body, and the other of which is a movable member to move in a first direction relative to the immovable member when impact load is applied; and

an energy absorbing system to absorb impact energy in case of a collision of a vehicle, the energy absorbing system comprising,

a holding member mounted on the first member and formed with an elongate hole elongated in the first direction;

a sliding shaft mounted on the second member, extended through the elongate hole in a second direction crossing the first direction and arranged to slide forcibly in the elongate hole to absorb impact energy by frictional resistance and plastic deformation between the sliding shaft and the elongate hole when the movable member moves in the first direction relative to the immovable member, the sliding shaft including a smaller portion having a smaller sectional size and a larger portion having a larger sectional size larger than the smaller sectional size;

an actuating mechanism to shift a position of the sliding shaft in the second direction, between a first shaft

position at which the smaller portion of the sliding shaft is positioned within the elongate hole, and a second shaft position at which the larger portion of the sliding shaft is positioned within the elongate hole, and

a controlling section to control the position of the sliding shaft in the elongate hole by controlling the actuating mechanism in accordance with an operating condition indicative of a magnitude of the impact load.